

REMARKS

Applicants thank the Examiner for the thorough consideration given the present application. Claims 1, 3-14 are pending in the present application. Claims 3 – 9 are amended. Claim 2 is cancelled. Claims 1, 3 and 4 are independent claims. Claims 11-14 are new.

Allowable Subject Matter

During a telephone conversation with Applicants' representative on April 18, 2008, the Examiner indicated that claims 3-8 are objected to as otherwise allowable claims dependent from a rejected base claim. Applicants thank the Examiner for noting the allowability of claims 3-8 and have amended claims 3 and 4 into independent format per the Examiner's suggestion. Accordingly, Applicants respectfully request the allowance of independent claims 3 and 4 and all claims depending therefrom.

Claim Rejection – 35 U.S.C. §103

Claims 1, 2, 9, and 10 stand rejected as being unpatentable over Japanese Patent Publication 2003-248057 by Ashida ("Ashida") in view of U.S. Patent 6,085,151 to Farmer ("Farmer"). Insofar as it pertains to the presently pending claims, this rejection is respectfully traversed.

Farmer teaches a collision avoidance system for a vehicle, with one embodiment of the system using RF scanning for target detection. (Abstract). Specifically, Farmer teaches a clustering algorithm "to reduce the multiple sensor reports from single large objects ... to reduce the number of objects tracked and to logically group and track complete objects rather than

portions of objects.” (Col. 12, lines 8-13). The stated purpose of this clustering is to allow the disclosed system “to separately track cars near bridges and other stationary objects.” (Col. 12, lines 22-23).

Claim 1

Independent claim 1 pertains, in part, to a radar system with “a clustering unit for, when external targets are close to each other, creating a cluster to include the external targets, based on the smoothed values of the positions of each of the external targets; and an intra-cluster target tracking filter for performing a correlation process, based on second gates, on the observed position values and the observed velocity values of the external targets belonging to the cluster formed by the clustering unit, to calculate, from the observed position values and the observed velocity values that satisfy the second gates, smoothed values of the positions and velocities of each of the external targets.”

The Examiner asserts that “clustering multiple targets that are close to each other is well known in radar systems since resolution might not be enough to clearly distinguish between far close targets,” and cites Farmer as exemplary of such clustering (Page 3 of Office Action). The clustering techniques taught by Farmer, however, deal with the consolidation of multiple signals from large individual targets and not with the consolidation of multiple distant targets into a single group because of low resolution. Farmer specifically teaches that “a clustering algorithm is performed to reduce the multiple sensor reports from single large objects ... and track complete objects rather than portions of objects.” (Col. 12, lines 9-12).

Farmer does not teach tracking individual cluster signatures after correlation, instead Farmer computes a cross-range extent for the continuous large object identified by the clustering algorithm and proceeds to treat it as a single object based on its cross-range extent and centroid. (Col. 12, lines 24-28). Farmer does not subsequently separately track or measure the individual positions or velocities of the target signals comprising a large-object cluster.

Applicants respectfully submit that Farmer therefore does not teach or suggest “a correlation process, based on second gates, on the observed position values and the observed velocity values of the external targets belonging to the cluster formed by the clustering unit, to calculate, from the observed position values and the observed velocity values that satisfy the second gates, smoothed values of the positions and velocities of each of the external targets” as required by independent claim 1.

Claim 2

Claim 2 is cancelled, rendering its rejection moot.

Claims 9 and 10

Applicants respectfully submit that claims 9 and 10 are allowable at least by virtue of their dependency from independent claim 1.

Summary

Applicants respectfully submit that neither Ashida nor Farmer, taken either alone or in combination (assuming the references may be combined, which Applicants do not admit), teach or suggest “a correlation process, based on second gates, on the observed position values and the observed velocity values of the external targets belonging to the cluster formed by the clustering unit, to calculate, from the observed position values and the observed velocity values that satisfy the second gates, smoothed values of the positions and velocities of each of the external targets” as required by independent claim 1 and all claims depending therefrom. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

New Claims

Applicants respectfully submit that new claims 11-14 are allowable for at least the same reasons as presented for independent claims 1, 3, and 4.

Conclusion

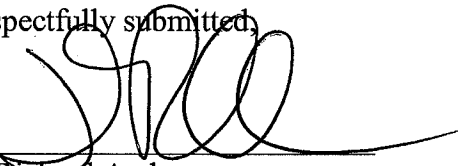
Since the remaining patents cited by the Examiner have not been utilized to reject the claims, but to merely show the state of the art, no comment need be made with respect thereto.

In view of the above amendment, applicant believes the pending application is in condition for allowance. Thus, the Examiner is respectfully requested to reconsider the outstanding rejections and issue a Notice of Allowance in the present application.

However, should the Examiner believe that any outstanding matters remain in the present application, the Examiner is requested to contact Applicants' representative, Naphtali Matlis (Reg. No. 61,592) at the telephone number of the undersigned in order to discuss the application and expedite prosecution.

Dated: June 30, 2008

Respectfully submitted,



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